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AUTHOR Wood, Carolyn M.
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ABSTRACT

Attitudes related to standardized achievement and ability tests were examined among a group of elementary and middle school teachers and administrators whose students are tested annually to fulfill a statewide accountability law. Teachers' survey responses indicated general support for testing and for the use of test results for diagnosing school- and system-wide instructional strengths and weaknesses, for demonstrating school accountability (along with other indicators), and for assisting in the establishment of homogeneous instructional groups. Test results were viewed, however, as less important than teacher observations and teacher-made tests as tools for instructional decisions. Teachers were more likely to cite specific uses of test results, however, if they perceived administrators in their building as using the results. Administrators and counselors expressed somewhat more confidence than teachers in the usefulness of standardized tests for specific instructional purposes. Teachers' experience and information about testing were found to be largely unrelated to their test use practices and attitudes. (Author)

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The Role of Standardized Achievement Tests in the Management of Instruction: A Survey of Teacher and Administrator Practices and Attitudes

Carolyn M. Wood
Harford County (Md.) Public Schools

Widespread use of standardized achievement tests as tools for establishing accountability in public education has generated much interest and controversy concerning the validity, appropriateness, and overall educational worth of these instruments. While allowing that such tests can paint in broad strokes a picture of school and district-wide academic proficiency, many educators have expressed concern that they are of little use to teachers in the daily planning, management, and assessment of instruction. Effective instruction depends to a large degree upon the availability to the teacher of timely, accurate, and relevant information about students. Teachers do in fact obtain and use information from a variety of sources, both formal and informal. Standardized tests represent one potential source of information. Teacher-made tests and classroom observation represent less formal and more immediate information and likely play a more important role in teachers' day-to-day planning. The purpose of this investigation is to obtain data descriptive of the test use practices and beliefs about testing and their correlates which are characteristic of teachers in a school district in which large-scale standardized achievement testing is conducted to meet state accountability assessment mandates. The investigation, which in part represents the needs assessment component of the district's program for instructional improvement through better use of test results, is intended specifically to address the following questions:

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1. Are teachers able to identify elementary measurement concepts associated with standardized test scores? What relationships exist between teacher competency in measurement and test use habits?
2. What types of test scores do teachers find most useful? Are they able to interpret these scores properly?
3. What do teachers see as the proper use/s of standardized test scores (e.g. accountability, reporting to parents, supporting instructional decisions, etc.)?
4. When and how often do teachers review individual and group achievement scores? What facilitates or inhibits their use of such information?
5. What is the relative frequency with which teachers consult standardized test scores specifically for information to support decisions about total class instruction versus individual student instruction? What is the relative usefulness of test scores in support of decisions regarding pacing, grouping, and content to be covered? Does the grade level assignment of the teacher affect the frequency and nature of use?
6. When standardized test information becomes available mid-year, what, if any, changes do teachers make in their instructional practices to accomodate new information?
7. How do administrative and supervisory personnel perceive the uses of test score information? What are the correlates of their attitudes (e.g. professional experience and training, population of school served)?

8. What is the impact of standardized test scores upon parent-teacher communication? How do teachers share test results with parents?
9. What priorities for in-service training in testing and measurement are identified by teachers? What training modes are preferred?

Background

Teachers' attitudes towards standardized tests have been widely discussed (cf. Rudman et al, 1980); yet much of what has been written reflects subjective judgment about how teachers perceive testing rather than direct observation of test use or, for that matter, discussions with teachers about their beliefs and practices. Many basic issues regarding teachers' use of test results remain unresolved. Some investigators have speculated that for a variety of reasons test scores exercise little influence upon teacher decision-making. However, results of a recent survey by Stetz and Beck (1980) reveal that teachers do generally accept standardized testing as a legitimate and even helpful activity.

The specific ways in which teachers use standardized test results in planning and assessing instruction and the factors which influence patterns of use remain largely to be explored. In regard to the latter, teachers' knowledge about assessment (Goslin, 1967; Yeh, 1978) and their experience administering tests (Goslin, 1967) as well as their overall teaching experience (Yeh, 1978); the test format (Calfee and Juel, 1977); and the test scores earned by their students (Yeh, 1978) all have been identified as influencing use. Other possibilities, however, suggest themselves; among them, emphasis placed by school administrators upon test scores, the

manner of presentation of test results, the amount and kind of inservice assistance provided in the use of results, and the perceived correspondence between what is tested and what is taught.

In regard to the former, apart from personal and environmental characteristics influencing teachers' beliefs about standardized tests, intriguing questions about the specific--and proper--role of test information in teachers' planning and management decisions have been raised in the literature. If, as Clark and Yinger (1977) and later Shulman (1978) suggest, instructional management decisions are not goal-determined but rather content-determined, one might suppose that mastery-type information specific to the content being taught typically derived from teacher-made tests, would be viewed by most teachers as more helpful than the descriptions of status or rank which standardized tests are designed to provide. Shavelson and Borko (1979), however, describing "preactive teaching," suggest that standardized test scores do find a use in support of the grouping and pacing decisions which precede actual instruction. One might speculate also about the effects of test score use upon individualization and about teachers' perceptions of the relative usefulness of standardized test information in instructional decision-making for individuals versus groups.

Method

A questionnaire addressing both knowledge about testing and measurement and attitude towards and use of standardized test results was administered during January, 1982, to 215 third, fifth, and eighth grade teachers in a Maryland school district enrolling about 30,000 students. The Teacher Survey of Test Beliefs and Practices (see Appendix A) includes 38 items concerning

types of standardized test scores, the uses of test scores in the schools, and measurement concepts and issues of concern to teachers. The final section of the Survey addresses teacher training needs. A complementary questionnaire was administered to 120 school administrators and guidance counselors at the same time. The Administrator Survey of Test Beliefs and Practices (see Appendix B) includes 24 items concerning test scores and their uses as well as a section addressing the training needs perceived by school administrators and counselors.

The timing of the surveys, which followed by approximately six weeks the completion of the administration of a standardized achievement test, the California Achievement Test (CTB/McGraw-Hill, 1977), mandated statewide for accountability, and an ability test [The Otis-Lennon School Ability Test (Psychological Corporation, 1979) and the Cognitive Abilities Test (Riverside Press, 1970) were administered at different grade levels], was designed to provide both for maximum respondent familiarity with the content and structure of the tests and for maximum interest in the use of the test scores as well.

Responses were received from 50 per cent of the teachers at each grade level and from 56 per cent of the administrators and counselors. Among the 105 teacher respondents, 38 teachers described themselves as assigned to grade 3, 38 to grade 5, and 29 to grade 8. More than 60 per cent had earned at least a Master's degree. Respondents averaged ten years of teaching experience. Nearly two-thirds of the respondents reported some graduate training in testing and measurement, including 24 per cent who indicated that they had taken two or more graduate courses in testing.

Statistical analysis of the responses to both surveys was performed

through the Statistical Package for the Social Sciences (Nie et al, 1975). Response frequencies and intercorrelations were obtained and examined.

Results

The Teacher Survey of Test Beliefs and Practices addresses broad topics associated with standardized testing in the schools including the perceived emphasis given to test scores by administrators, parent attitudes towards testing, frequency of test score use by teachers, the significance of test scores to instructional decision-making, the correct interpretation of various types of test scores, and training topics and methods.

Overall, teachers' responses suggest they feel fairly comfortable with standardized testing in the schools. About 38 per cent of the teachers believe that too much time is spent in testing, while nearly 54 per cent feel that the present amount of time spent is satisfactory or even insufficient. Most teachers refer to students' standardized test scores at least occasionally: only 25 per cent reported that they "seldom" or "never" look at the scores. Moreover, access is not a problem, with 95 per cent of respondents reporting "easy" access to scores.

Most teachers (71 per cent) are interested in examining scores as soon as the most recent (Fall) test results are available. Slightly under 50 per cent report examining scores at the beginning of the school year. Examination of test results at the beginning of the year, when planning decisions are made, might suggest that teachers who do so (even though the scores are not current) are more likely to see test scores as planning tools. It is interesting to note in this regard a small but statistically significant relationship between beginning-of-the-year score review and teachers'

response that test scores are useful for grouping students ($r = .17$, $p < .03$), for individualizing instruction ($r = .15$, $p < .05$), and for assessing teaching effectiveness ($r = .20$, $p < .01$).

In fact, teachers report their main difficulty in using test scores to be timing. Fall (November) testing results are not generally available in the schools until late February. Not surprisingly, 41 per cent of teacher respondents indicated that lateness is the primary obstacle to fuller use of test results. It is not the only obstacle, however. Other concerns mentioned by teachers include a sense of uneasiness about standardized tests, a suspicion that standardized tests are not closely related to the curriculum, and that test scores are not reliable. The concern with the curricular validity of standardized achievement tests is supported by the teachers' rating of the relationship between the California Achievement Test, administered systemwide, and what is actually taught in reading, language, and mathematics. About 60 per cent of the respondents indicated they "don't know" what the relationship is; and fewer than 30 per cent of those who did rate the test's validity indicated that the test and the curriculum are "highly related."

Teachers' apparent interest in test scores but uncertainty about their proper use in instruction seems to parallel their perceptions of administrator and parent attitudes. Eighty-six per cent of the teachers reported that test results are presented formally to the faculty by the administration, and 66 per cent said that scores are presented to the PTA. Only six per cent perceive that administrators place little or no emphasis upon test scores. However, only 20 per cent believe that administrators take test scores into consideration while selecting textbooks and 23 per cent that

test scores influence decisions about programs. Only pupil grouping and placement decisions are heavily influenced by test scores, according to teachers.

A significant majority of the teachers (83 per cent) believe that parents are interested in test scores. Most (59 per cent) feel parents are interested only in their own child's performance. School-wide and district-wide scores are of concern only to a minority of parents (25 per cent). Thus, while a certain amount of attention is given to test scores, administrators (as perceived by teachers) use scores only in documenting and/or certifying performance; teachers have the impression that once scores are examined and summary data obtained, there is little continuing use of scores as planning or management aids. Parents are not primarily interested in the applications of test scores to school accountability but rather see the scores as important for their own child.

The major focus of the survey was upon teachers' own attitudes and practices concerning test use, their knowledge about testing, and the relationship between knowledge and use. Teachers were asked first to indicate their attitudes towards three major categories of test use: accountability and assessment, instructional diagnosis, and instructional planning (see Table I). Broad diagnostic uses of results to identify schoolwide and systemwide curriculum strengths and weaknesses received the highest ratings from teachers, followed by some accountability uses. Program and teacher assessment were not seen as appropriate uses for test scores (although the distinction being made by teachers between general accountability - reporting to the public, comparing schools, etc. - and program assessment is not totally clear). Lowest ratings overall were

assigned to instructional uses, particularly selecting materials for individuals and pacing instruction. Correlations between items representing different categories of use were generally not significant, although intercorrelations within categories were generally significant.

Within the general area of instructional uses, teachers were asked then to rate on a scale of 1 (not useful) to 5 (very useful) the relevance of each of five different pupil performance indicators - standardized achievement test score, ability test score, textbook series test score, previous teacher's rating, and own observation - to decisions involving grouping of students, content covered, pacing of instruction, teaching strategy, and assessment of what has been taught (see Table 2). Not surprisingly, in light of the teachers' overall response to the instructional applications of test scores, the highest rating was given to "own observation" in all decision categories. In two categories, content and strategy, standardized achievement test scores ranked with the least useful among the five indicators.

Correlates of these responses were investigated as well, with some interesting results. To begin with, teacher experience somewhat surprisingly correlated significantly with only two preferred uses: using standardized achievement test scores in determining teaching strategy ($r = .16$, $p < .02$) and using previous teacher's ratings in determining teaching strategy ($r = .17$, $p < .01$), both suggesting that the use of test scores for instructional planning does not change as teachers gain experience in the classroom. Further, while teachers' belief that administrative decisions about programs to be offered in their building are influenced by test scores is not related to their <u>own</u> use of standardized achievement scores in instructional decision-

making, it is slightly but significantly negatively related to their reliance upon their own observation for decisions concerning pacing ($r = -.22$, $p < .009$) and strategy ($r = -.30$, $p < .001$). Moreover, there are small but statistically significant relationships between teachers' use of standardized achievement test scores for instructional decisions and their perception that administrators also use test scores in making decisions about textbooks and grouping students.

Finally, small but statistically significant negative relationships emerged between teachers' belief that too much time is spent in testing and their use of standardized achievement scores in determining teaching strategy ($r = .17$, $p < .026$) and in assessing the effects of instruction ($r = .23$, $p < .01$).

As a means of examining in greater detail teachers' use of test scores in grouping students, the Survey also asked for a rating of the importance and the reliability of each of six possible sources of information. As expected, the correlations between the usefulness rating and perceived importance were all positive and significant; correlations between usefulness and perceived reliability of the indicators also were statistically significant but low (approximating 0.30). Consistent with their ratings of these indicators as useful for each of five types of instructional decisions, teachers gave lowest ratings on both usefulness and reliability to standardized ability and achievement tests as indicators for grouping, with mean ratings on a three-point scale of 1.97 and 1.95, respectively, for "importance," and 1.87 and 1.90, respectively, for "reliability." Classroom observation was perceived by teachers as the most important (mean rating = 2.55) and also the most reliable (mean rating = 2.53) indicator for grouping.

Teachers also were asked to rate on a scale from 1 (definitely will not) to 5 (definitely will) the likelihood of their modifying the instruction they provide in a number of specific ways once current test results are available. Here, too, while more than 71 per cent of the teachers indicated that they would use the results in some way, only a minority identified specific ways they planned actually to modify current practice. For example, only 29 per cent of the teachers plan "definitely" to emphasize different skills once current scores are available (this activity received the highest average rating of 3.76 out of a possible 5). None of the teachers "definitely" plans to regroup students or to alter the pace or the sequence of instruction. On the other hand, 47 per cent will "definitely" discuss the scores with the principal, 37 per cent with the faculty. These findings seem to support further the idea of an interest in testing but rather little direct impact of test scores upon decision-making and instruction as it actually occurs in the classroom.

For example, teachers' belief that test scores influence administrative decisions about textbook selection is related to their own response to scores and subsequent plans for re-grouping ($r = .26$, $p < .002$), for determining/changing the pace of instruction ($r = .27$, $p < .001$), for simply "reviewing" the scores ($r = .21$, $p < .008$), for changing their teaching approach ($r = .19$, $p < .02$), for emphasizing different skills ($r = .28$, $p < .001$), and for changing the content sequence ($r = .17$, $p < .025$).

Relationships between teachers' general knowledge of testing and measurement concepts and their own use of test scores also were examined. The Survey contained twelve items addressing validity, reliability, types of test scores, differences between norm-referenced and criterion-referenced

tests, and the correct interpretation of test scores. The twelve items were scored and the sum of each respondent's correct responses was computed as an index of test understanding (TU). The scores varied from 0 to 10, with a mean of 4.2 and a standard deviation of 1.95. Overall, performance was low; only nine teachers out of 105 answered seven or more of the 12 items correctly. As expected, teachers found some items easier than others. A large majority (88 per cent) were able to define correctly percentile rank and to interpret the meaning of a difference between two percentile ranks. Only a third, however, recognized that the percentile rank scale is not an equal interval scale. Fewer than one third were able to interpret a difference between stanine scores, to identify the definition of validity, or to distinguish between validity and reliability. Fewer than 20 per cent were able to identify the purpose of a norm-referenced test versus a criterion-referenced test or to recognize that aptitude tests do not directly measure either "capacity" to learn nor do they reflect innate, unchanging traits. Fewer than 10 per cent recognized that grade equivalent scores are not as useful as standard scores in comparing learning across tests or across testing occasions.

As expected, TU was related (significantly but only slightly) to experience ($r = .14$, $p < .03$). Surprisingly, however, the TU score was only weakly related or unrelated to test use practices. Teachers' perceptions of the usefulness of standardized achievement and ability test scores for decisions concerning grouping, content, pacing, teaching strategy, and assessment all were found to be unrelated to TU. Neither the perceived importance nor the perceived reliability of six different performance indicators (including standardized test scores) in grouping

was found to be related to TU. TU similarly was unrelated to anticipated teacher actions upon receiving current test scores (except for a slight but significant association with "changing the pace of instruction" and "changing how I am teaching some students"). While insufficient data are available to support any hypothesis, one might predict that specific information about the uses of test scores is more likely to be associated with test use than is more general knowledge about testing.

Finally, teachers were asked to rate the importance of a variety of possible training topics and to identify a preferred training setting. Among the 29 teachers who responded to this section, the interpretation of test scores was the most popular topic (41 per cent assigned a rating of "5"), scoring tests the least popular. An in-service course was preferable to faculty meetings and graduate courses as a training method. However, the low rate of response (28 per cent) to the training section suggests a less than overwhelming desire among these teachers to receive any training concerning testing and measurement.

Teachers' perceptions of the attitudes of school administrators towards testing may, the results of the Survey suggest, influence in some ways their own attitudes and practices concerning test scores. Since guidance and leadership in the use of test scores in each building are likely to rest with the school administrator and the guidance counselor, these staff members' knowledge about testing, their practices related to tests, and their use of test results are likely to be significant determiners of the place of testing in the instructional program in the school building.

According to the Survey of Test Beliefs and Practices, administrators and counselors report general satisfaction that "test results justify the

time spent" in their school (64 per cent). Moreover, all but one per cent of the respondents refer to the standardized test scores of their students "always" (39 per cent) or "sometimes" (60 per cent).

In terms of formal use of the scores, 81 per cent present results to their faculty, and 61 per cent to the PTA or other parent group. Only six per cent of the respondents admit to placing "little emphasis" upon test results. Over 80 per cent of the respondents use test scores in grouping and pupil placement decisions; however, less than half the respondents reported that textbook selection and programs are influenced by test scores.

A great majority (72 per cent) of administrators believe parents are concerned only with their child's scores as opposed to performance in the school at large (45 per cent) or in the district (24 per cent). About thirty per cent report that parents have difficulty understanding test scores, although 57 per cent of the respondents did agree that "test scores help me to communicate with parents." Individual test scores are routinely shared with parents, according to 90 per cent of the administrators and counselors who responded. Some 54 per cent describe themselves as sharing only "some" information, while 25 per cent share "all" standardized test information with parents.

Like the teachers, most administrators examine test scores as soon as they are available (91 per cent); only 30 per cent look at scores at the beginning (30 per cent) or the end (24 per cent) of the year. Administrators like teachers identified a variety of problems in using test scores, however. Nearly 38 per cent of the respondents describe test scores as coming too late in the school year. At least ten per cent of the respondents cited as other problems difficulty in interpreting test scores (12

per cent) and a lack of relationship between the test and the curriculum (10 per cent). These responses, too, are consistent with those of the teachers. Like teachers, administrators and counselors are moderately familiar with the California Achievement Test (76 per cent indicate they are "somewhat" or "very" familiar with the content of the test). Generally, it seems that administrators and counselors believe that the relationship between the CAT-C and the curriculum in reading, language, and mathematics is at least moderate. In reading, 72 per cent characterize the test and what is taught as "somewhat" or "highly" related. Slightly fewer acknowledged a relationship this close in language and mathematics. However, even here more than 50 per cent of the respondents indicated a high degree of curricular validity.

Like teachers, administrators and counselors were asked to rate the usefulness of standardized ability and achievement test scores for a variety of purposes. Compared to teachers, administrators and counselors tended to assign a higher usefulness rating to nearly every possible use. Within accountability-related uses, for example, administrators and counselors assigned to standardized tests higher ratings for each use except "comparing school systems," "comparing students," and "reporting to the public" (two of which at least are somewhat distant from the classroom). Administrators and counselors gave much higher ratings to tests than did teachers for all instructional uses (although the ranking of uses was the same). Curiously, teachers, however, saw a greater overall diagnostic use of tests (but not in the classroom), further supporting an impression that testing seems to be regarded more positively the more distant its use from the respondent's immediate experience.

As a means of surveying administrators' and counselors' overall knowledge about testing, the Survey includes four items concerning validity and reliability, characteristics of score types, a definition of aptitude, and a test score interpretation problem. Examination of responses to these items suggests that these respondents are about as familiar as teachers with the nature of validity (only 34 per cent correctly identified the concept). The limitations of grade equivalent scores as a device for measuring students' growth over time seem to be unrecognized by administrators and counselors, even though they have generally more training and experience than teachers. Nearly 60 per cent stated that grade equivalency scores are preferable to standard scores and normal curve equivalents as a measure of growth. Aptitude tests also are less than clearly understood by administrators and counselors: nearly half preferred a definition of the tests as measuring "innate ability which is stable over time" (as opposed to a more current emphasis upon skills not commonly taught, this compared to an achievement test which measures directly school learning). Surprisingly, however, nearly half the respondents were able to interpret correctly a hypothetical situation requiring the comparison of a child's achievement and aptitude test scores.

Finally, administrators and counselors were, like teachers, asked to rate the importance of five test training topics and their preference for each of five training methods. Concerning the first, these respondents, like the teachers, expressed greatest interest in the interpretation of test scores (assigned the highest rating by 45 per cent of respondents), and then in the use of test information for instruction (assigned the highest rating by 37 per cent of respondents). Special system-sponsored in-service

workshops were identified by a majority of respondents (83 per cent) of the preferred training setting.

Conclusions

A significant increase in recent years in the amount of standardized testing conducted in school systems throughout the nation has raised serious questions concerning the relationship between the benefits realized through testing and the cost, both directly and in terms of instructional time. A statewide accountability law mandates the administration of a standardized test of achievement in the basic skills, the California Achievement Test, to the approximately 7,000 students enrolled in grades 3, 5, and 8 in the Harford County Public Schools. Other standardized assessments of ability and achievement are administered at other grade levels in the school system. The resources devoted to this testing activity and the importance of test results to the public mandate a closer look at the effects of testing upon the most direct users of test results - school administrators, counselors and teachers.

Results of the Teacher Survey, administered to all teachers who administer the California Achievement Test, and the Survey of Test Beliefs, administered to school administrators and counselors, suggest that while standardized testing is generally accepted as a necessary activity, the use of test results does not go far beyond accountability and broad-based assessment and the use of individual test scores as a basis for grouping and placement decisions. Test scores are widely discussed with teachers and where appropriate, test information is shared with parents. Yet test results are not, apparently for a variety of reasons, widely used in the

instructional program as a basis for planning and management decisions. Administrators' direct use of test results for instructional improvement does seem to have at least some influence upon teachers' attitudes towards test use. Overwhelmingly, however, teachers prefer to rely upon their own observation (and teacher-made tests) when determining the content, strategy, and pacing of instruction. Thus, while seven out of ten teachers indicated they will respond in some way to the test results once they become available, there was very little indication of what it is specifically that they plan to do with the results, this in spite of the fact that mastery-type information directly related to students' instructional progress has been made available. Significantly, too, neither experience nor knowledge about testing, which is generally low, is related to test use habits.

Administrators, too, generally perceive the test results as somewhat limited in usefulness for accountability-type functions. Interestingly, administrators and teachers tend to view the results as more significant for purposes somewhat removed from their direct responsibility (e.g. teachers tend to view results as more important to the school and system, less important in the classroom; while administrators' attitudes tend to reverse the importance of these uses).

There is much support among both groups for in-service training focused upon the interpretation and use of the results. Although teachers' general knowledge about testing is not related to test score use, the survey results suggest that specific training in the interpretation and use of tests may influence teacher attitudes and practices. An understanding of teachers' and administrators' overall test use attitudes and practices should provide both for an improved overall understanding of the dynamics of test use in

the schools and for a more effective in-service training program directed to the needs of teachers and administrators.

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